12/28/91

To: Pat Young & Norm Lovelace, OPINAP
From: Sheila Wiegman, ASEPA
Re: Cannery NPDES Monitoring Program

Attached is further suggestions on the cannery NPDES monitoring program. I appreciate any further input from you guys. I faxed the same letter to Doug at a fax # he gave me. I listened to meeting he had with Steve Costa last week — Doug can give you details. This is almost as bad as the consent agreement!

I hope all is well with you & Happy New Year.

OFFICE OF THE GOVERNOR
ENVIRONMENTAL PROTECTION AGENCY

December 27, 1991

To: Doug Liden, USEPA Region IX, Permits Section

From: Sheila Wiegman, Environmental Coordinator, ASEPA

Re: Cannery NPDES Monitoring Program

I would like to provide additional suggestions for the American Samoa cannery NPDES permits. As eutrophication of Pago Pago Harbor is a major potential impact of the cannery effluent, obtaining data to determine the eutrophic state of the harbor and to monitor future trends related to eutrophication would be appropriate. Chlorophyll a in the water column does provide some measure, but it does not provide information on the species levels or classes of phytoplankton. Determining whether the water body is limited by nitrogen or phosphorus can assist with proper control of nutrient inputs and so that the desired level of plant biomass is obtained. It has been previously suggested that harbor phytoplankton is sensitive to phosphorus levels, but this should be verified.

Another important measure that could be studied is the role of sediments in nutrient concentration in Pago Pago Harbor. The American Samoa Government (ASG) has collected data on toxic components of the harbor sediments in the pilot harbor toxicity study, but little data is available on nutrient or organic concentrations. The future, expanded ASG Toxicity Study will provide more data on the toxic components of the harbor sediments. This will likely be a one time study and could include nutrient measurements, but collection of data over time would provide information on changes occurring in Pago Pago Harbor due to the reduction of nutrient inputs (institution of high strength waste segregation) and relocation of the cannery discharge. Sedimentation may play or have played an important role in removing nutrients from the harbor. The changes in nutrient loading could lead to release of nutrients from the sediments impacting harbor recovery. In addition, the nutrient and organic components of the sediments may affect the concentration and availability of heavy metals affecting toxicity.

Our suggestions for the cannery permits in order to obtain the above types of information are:

1. The permittee cooperatively with Samoa Packing Co., NPDES permit No. _____ (or Star-Kist Samoa...), shall complete a study in which a direct assessment of the algal-nutrient relationships in Pago Pago Harbor is ~~are~~ obtained. This study shall include construction of algal-nutrient response response curves for a range of nitrogen:phosphorus ratios, nitrogen and phosphorus levels, salinity levels, and phytoplankton species. A proposed study design shall be submitted to USEPA and the EQC within six months of the effective date of the permit. The study shall be completed within one year of the effective date of the permit, and a report of the findings shall be submitted to USEPA and the EQC by that date.

2. The permittee cooperatively with Samoa Packing Co., NPDES permit No._____ (or Star-Kist Samoa....), shall undertake a yearly sediment monitoring program in Pago Pago Harbor in order to assess the concentration of nutrient and organic components, the distribution of stored nutrients, the size of the nutrient reservoir, and the rate of accumulation of nutrients. Seven sites shall be located within Pago Pago Harbor and analysed for TN, TP, percent organics, percent solids, and bulk density. Three sites shall be located in inner Pago Pago Harbor and four sites shall be located in the outer harbor. These sites shall be approved by USEPA and the EQC prior to sampling. This monitoring shall take place annually by the anniversay date of the effective date of the permit, and a report of the findings shall be submitted to the USEPA and EQC 90 days after completion of sampling.

I will call you on January 6, 1991, from PICO in Hawaii should you have any questions.

cc: Norm Lovelace, USEPA, OPINAP
Pat Young, USEPA, OPINAP